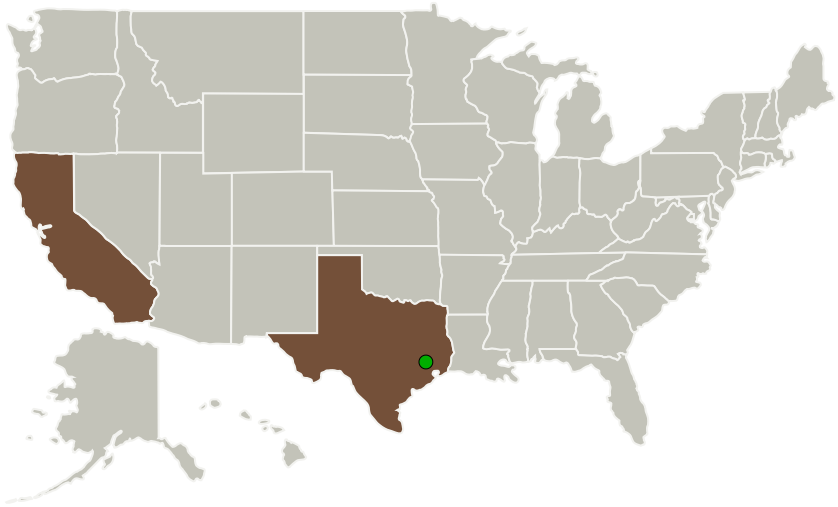
Wireless Hybrid Identification and Sensing Platform for Equipment Recovery (WHISPER), Phase I

Completed Technology Project (2014 - 2014)

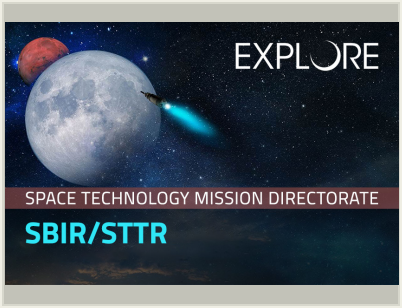
Project Introduction

Advanced Systems & Technologies proposed WHISPER (Wireless Hybrid Identification and Sensing Platform for Equipment Recovery) solution to NASA's need for automatic location and tracking of a large number of individual crew items in a space habitat microgravity cabin is to combine a EPCglobal compliant WISP wireless identification and sensing platform (a quarter-sized device that is powered and read by off-the-shelf UHF RFID readers and contains a microcontroller and INS) with an IR sensor that works in conjunction with AS&T's existing Low Latency Infrared Positional Operating Projection (LOLIPOP) system. This would enable simple wireless location tracking of an unlimited number of items such as fasteners, hand tools, and clothing but would also do more complex orientation and velocity tracking. WHISPER modules can also be attached cold thruster maneuver platforms or even personnel for monitoring tasks or exercise.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Advanced Systems & Technologies, Inc.	Lead Organization	Industry	Irvine, California
Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas



Wireless Hybrid Identification and Sensing Platform for Equipment Recovery (WHISPER), Phase I

Table of Contents

Small Business Innovation Research/Small Business Tech Transfer

Wireless Hybrid Identification and Sensing Platform for Equipment Recovery (WHISPER), Phase I

Completed Technology Project (2014 - 2014)

Primary U.S. Work Locations	
California	Texas

Project Transitions

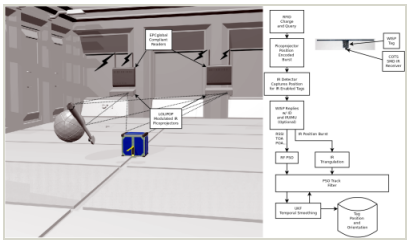
June 2014: Project Start

December 2014: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/140544)*

Images



Briefing Chart
Wireless Hybrid Identification and Sensing Platform for Equipment Recovery (WHISPER), Phase I *(https://techport.nasa.gov/image/127185)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Advanced Systems & Technologies, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

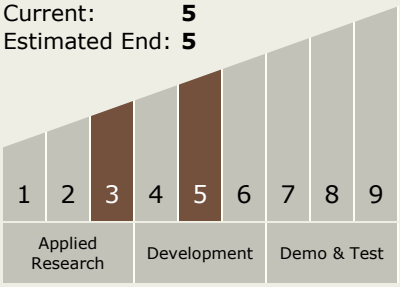
Carlos Torrez

Principal Investigator:

Stephen Kupiec

Technology Maturity (TRL)

Start: **3**
Current: **5**
Estimated End: **5**



Wireless Hybrid Identification and Sensing Platform for Equipment Recovery (WHISPER), Phase I

Completed Technology Project (2014 - 2014)

Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - TX06.1 Environmental Control & Life Support Systems (ECLSS) and Habitation Systems
    - TX06.1.4 Habitation Systems

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System